



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0052; Directorate Identifier 2013-NE-02-AD]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Rolls-Royce plc (RR) RB211-535E4-37, RB211-535E4-B-37, RB211-535E4-C-37, and RB211-535E4-B-75 turboprop engines. This proposed AD was prompted by RR updating the low-cycle-fatigue life analysis for the low pressure turbine (LPT) stage 2 discs. This proposed AD would require removal of affected parts using a drawdown plan. We are proposing this AD to prevent LPT stage 2 disc failure, which could result in uncontained engine damage and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: 202-493-2251.

For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; or email from http://www.rolls-royce.com/contact/civil_team.jsp; or download the publication from <https://www.aeromanager.com>. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (phone: 800-647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England

Executive Park, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: Robert.Green@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0052; Directorate Identifier 2013-NE-02-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2012-0266, dated

December 18, 2012, to correct an unsafe condition for the specified products. That mandatory continuing airworthiness information (MCAI) states:

A recent re-evaluation of Critical Part lives carried out by Rolls-Royce revealed changes to the thermal profile and stresses in certain features of the low pressure turbine (LPT) Stage 2 disc. These changes have resulted in a reduction of the cyclic life of the LPT stage 2 discs.

Operation of an engine equipped with a Critical Part that has exceeded its cyclic life may result in Critical Part failure, consequent release of high energy debris, damage to the aeroplane and/or injury to occupants.

We are proposing this AD to prevent LPT stage 2 disc failure, which could result in uncontained engine damage and damage to the airplane. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

RR has issued Alert Non-Modification Service Bulletin (NMSB) No. RB.211-72-AH029, dated December 13, 2012. The NMSB introduces new LPT stage 2 disc part lives that will be the drawdown plan retirement thresholds.

FAA's Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of the United Kingdom and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This proposed AD would require removal of affected LPT stage 2 discs using a drawdown plan.

Differences Between the AD and the MCAI or Service Information

This AD differs from EASA AD 2012-0266, dated December 18, 2012, as follows: The EASA AD specifies replacing the affected critical parts during the module disassembly if the subsequent, anticipated time on wing (time before next shop visit) plus current life of the part will exceed the new provisional lives published in the RR Alert NMSB No. RB.211-72-AH029, dated December 13, 2012. We specify replacing at next shop visit (defined by the separation of a major flange).

Costs of Compliance

We estimate that this proposed AD would affect about 220 engines installed on airplanes of U.S. registry. The average labor rate is \$85 per hour. We do not estimate any labor cost associated with this proposed AD because the affected parts are replaced during scheduled shop visits. Prorated cost of the parts adjusted for lost life is about \$8,290 per engine. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$1,823,800.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866;
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Rolls-Royce plc: Docket No. FAA-2013-0052; Directorate Identifier 2013-NE-02-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected Airworthiness Directives (ADs)

None.

(c) Applicability

This AD applies to all Rolls-Royce plc (RR) RB211-535E4-37, RB211-535E4-B-37, RB211-535E4-C-37, and RB211-535E4-B-75 turbofan engines.

(d) Reason

This AD was prompted by RR updating the low-cycle-fatigue life analysis for the low pressure turbine (LPT) stage 2 discs. We are issuing this AD to prevent LPT stage 2 disc failure, which could result in uncontained engine damage and damage to the airplane.

(e) Actions and Compliance

(1) Within 30 days after the effective date of this AD, re-calculate the cyclic life since new of each LPT stage 2 disc. Use the part lives and prorated life formulas in Appendices 1, 2, and 3 of RR Alert Non-Modification Service Bulletin (NMSB) No. RB.211-72-AH029, dated December 13, 2012, to make that calculation.

(2) Assign the Maximum Approved Lives defined in Appendix 1 of Alert NMSB No. RB.211-72-AH029, dated December 13, 2012, to the LPT stage 2 disc based on the flight profile that will be flown.

(3) For engines that have an engine shop visit (ESV) after the effective date of this AD, remove the LPT stage 2 disc from service before the part exceeds the maximum approved life assigned in paragraph (e)(2) of this AD.

(4) For those engines that do not have an ESV after the effective date of this AD before the part exceeds the part life assigned in paragraph (e)(2) of this AD, remove the part from service at the next ESV.

(f) Installation Prohibition

With the exception of parts that can be reworked using RR Service Bulletin No. RB.211-72-D365, Revision 5, dated December 13, 2012, do not reinstall any part removed per this AD into any engine.

(g) Definitions

For the purpose of this AD, an ESV is whenever engine maintenance performed prior to reinstallation requires the separation of a pair of major mating engine module flanges. Separation of flanges solely for the purpose of shipment without subsequent internal maintenance is not a shop visit.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(i) Related Information

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: Robert.Green@faa.gov.

(2) Refer to European Aviation Safety Agency Airworthiness Directive 2012-0266, dated December 18, 2012, and RR Alert NMSB No. RB.211-72-AH029, dated December 13, 2012, for related information.

(3) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; or email from http://www.rolls-royce.com/contact/civil_team.jsp; or download the publication from <https://www.aeromanager.com>. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on March 28, 2013.

Colleen M. D'Alessandro,
Assistant Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

[FR Doc. 2013-07931 Filed 04/04/2013 at 8:45 am; Publication Date: 04/05/2013]